

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): An image forming apparatus comprising:

a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible;

a photoconductor on which a latent image can be formed; and

an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section;

wherein a longitudinal direction of said antenna is in a direction of movement of said moving body.
2. (original): An image forming apparatus according to claim 1, wherein said moving body moves rotatively.
3. (currently amended): An image forming apparatus comprising:

a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible;

a photoconductor on which a latent image can be formed; and

an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section;

wherein a longitudinal direction of said antenna is in a direction of movement of said moving body; and

~~An image forming apparatus according to claim 1,~~ wherein
a length of said antenna in said longitudinal direction is longer than a length of said element in said longitudinal direction.

4. (currently amended): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible;

a photoconductor on which a latent image can be formed; and
an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section;

wherein a longitudinal direction of said antenna is in a direction of movement of said moving body; and

~~An image forming apparatus according to claim 1,~~ wherein
said antenna is provided at a position that is in opposition to and extending over a first developing unit attached to a first attach/detach section and a second developing unit attached to a second attach/detach section that is adjacent to said first attach/detach section.

5. (original): An image forming apparatus according to claim 4, wherein
said antenna is provided at a position that is in opposition to at least either one of a first
element provided in/on said first developing unit or a second element provided in/on said second
developing unit.

6. (original): An image forming apparatus according to claim 2, wherein
said antenna is provided more to the outside than said element in a radial direction of
rotation of said moving body.

7. (original): An image forming apparatus according to claim 2, wherein
said antenna is provided more to the outside than said element in a direction of a rotation
axis of said moving body.

8. (original): An image forming apparatus according to claim 1, wherein
said antenna is capable of wirelessly communicating with said element of the developing
unit that is moving.

9. (currently amended): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing
unit is attachable to and detachable from each of said attach/detach sections, and said developing
unit has a developer containing section and an element with which communication is possible;
a photoconductor on which a latent image can be formed; and

an antenna for wirelessly communicating with said element of the developing unit
attached to the attach/detach section;

wherein a longitudinal direction of said antenna is in a direction of movement of said
moving body;

wherein said antenna is capable of wirelessly communicating with said element of the
developing unit that is moving; and

~~An image forming apparatus according to claim 8,~~ wherein
said antenna is used to write information wirelessly into said element of the developing
unit that is moving.

10. (original): An image forming apparatus according to claim 1, wherein
said antenna is capable of communicating with said element in a non-contact state with
respect to said element.

11. (original): An image forming apparatus according to claim 1, wherein
said antenna is used to write, into said element, information indicating a remaining
amount of developer contained in the developing unit provided with that element.

12. (original): An image forming apparatus according to claim 1, wherein
said antenna writes, into said element, information indicating a usage amount of
developer contained in the developing unit provided with that element.

13. (currently amended): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing
unit is attachable to and detachable from each of said attach/detach sections, and said developing
unit has a developer containing section and an element with which communication is possible;
a photoconductor on which a latent image can be formed; and
an antenna for wirelessly communicating with said element of the developing unit
attached to the attach/detach section;
wherein a longitudinal direction of said antenna is in a direction of movement of said
moving body;

~~An image forming apparatus according to claim 1, wherein:~~
said image forming apparatus comprises an AC voltage supply section for supplying an
AC voltage; and
wherein during a period from a start to an end of an image forming process, said image
forming apparatus writes information into said element of the developing unit attached to said
attach/detach section using said antenna when said AC voltage supply section is not supplying an
AC voltage.

14. (original): An image forming apparatus according to claim 13, wherein:
said developing unit has a developer bearing body for bearing developer; and
said AC voltage supply section supplies an AC voltage to said developer bearing body.

15. (original): An image forming apparatus according to claim 13, wherein:

said image forming apparatus comprises a charging member for charging said photoconductor; and

said AC voltage supply section supplies an AC voltage to said charging member.

16. (currently amended): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible;
a photoconductor on which a latent image can be formed; and
an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section;
wherein a longitudinal direction of said antenna is in a direction of movement of said moving body;

~~An image forming apparatus according to claim 1, wherein:~~
said image forming apparatus comprises an attach/detach opening through which said developing unit is attached to and detached from said attach/detach section;

wherein in a state in which said developing unit is positioned at an opposing position where said developing unit is in opposition to said photoconductor due to movement of said moving body, development of said latent image with the developer contained in said developing unit is possible;

wherein in a state in which said developing unit is positioned at a detaching position that is different from said opposing position due to movement of said moving body, detachment of

said developing unit from said attach/detach section via said attach/detach opening is possible;
and

wherein during a period from when said developing unit arrives at said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said image forming apparatus writes information into said element of said developing unit using said antenna.

17. (original): An image forming apparatus according to claim 13, wherein
a difference between a maximum voltage value and a minimum voltage value of said AC voltage is 1000 volts or more.

18. (original): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible;
a photoconductor on which a latent image can be formed; and
an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section, wherein:
a longitudinal direction of said antenna is in a direction of movement of said moving body;
said moving body moves rotatively;

a length of said antenna in said longitudinal direction is longer than a length of said element in said longitudinal direction;

said antenna is provided at a position that is in opposition to and extending over a first developing unit attached to a first attach/detach section and a second developing unit attached to a second attach/detach section that is adjacent to said first attach/detach section;

said antenna is provided at a position that is in opposition to at least either one of a first element provided in/on said first developing unit or a second element provided in/on said second developing unit;

said antenna is capable of wirelessly communicating with said element of the developing unit that is moving;

said antenna is capable of communicating with said element in a non-contact state with respect to said element; and

said antenna is used to write, into said element, information indicating a remaining amount or a usage amount of developer contained in the developing unit provided with that element.

19. (original): A developing unit comprising:

a developer containing section; and

an element with which communication is possible, wherein:

said developing unit is capable of being attached to and detached from an attach/detach section of a main body of an image forming apparatus that includes: a moving body provided with a plurality of the attach/detach sections, said developing unit being attachable to and

detachable from one of said attach/detach sections; a photoconductor on which a latent image can be formed; and an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section; and

a longitudinal direction of said element is in a longitudinal direction of said antenna when said developing unit is attached to said attach/detach section.

20. (original): A developing unit according to claim 19, wherein
said developing unit is capable of being attached to said attach/detach section of said moving body which moves rotatively.

21. (currently amended): A developing unit comprising:
a developer containing section; and
an element with which communication is possible,
wherein said developing unit is capable of being attached to and detached from an
attach/detach section of a main body of an image forming apparatus that includes: a moving
body provided with a plurality of the attach/detach sections, said developing unit being
attachable to and detachable from one of said attach/detach sections; a photoconductor on which
a latent image can be formed; and an antenna for wirelessly communicating with said element of
the developing unit attached to the attach/detach section;

wherein a longitudinal direction of said element is in a longitudinal direction of said
antenna when said developing unit is attached to said attach/detach section; and

~~A developing unit according to claim 19, wherein~~

a length of said element in said longitudinal direction is shorter than a length of said antenna in said longitudinal direction.

22. (original): A developing unit according to claim 19, wherein
said element is capable of communicating with said antenna in a non-contact state with respect to said antenna.

23. (original): A developing unit according to claim 19, wherein
said element stores information indicating a remaining amount of developer contained in the developing unit provided with that element.

24. (original): A developing unit according to claim 19, wherein
said element stores information indicating a usage amount of developer contained in the developing unit provided with that element.

25. (canceled)

26. (original): A computer system comprising:
a computer unit; and
an image forming apparatus that is connected to said computer unit and that includes

a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element with which communication is possible,

a photoconductor on which a latent image can be formed, and

an antenna for wirelessly communicating with said element of the developing unit attached to the attach/detach section,

wherein a longitudinal direction of said antenna is in a direction of movement of said moving body.

27. (original): An image forming apparatus comprising:

a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element into which information can be written;

a photoconductor on which a latent image can be formed;

a writing member for writing information into said element; and

an attach/detach opening through which said developing unit is attached to and detached from the attach/detach section, wherein:

in a state in which said developing unit is positioned at an opposing position where said developing unit is in opposition to said photoconductor due to movement of said moving body, development of said latent image with the developer contained in said developing unit is possible;

in a state in which said developing unit is positioned at a detaching position that is different from said opposing position due to movement of said moving body, detachment of said developing unit from said attach/detach section via said attach/detach opening is possible; and

during a period from when said developing unit arrives at said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said writing member writes information into said element of said developing unit.

28. (original): An image forming apparatus according to claim 27, wherein during a period from when a developer bearing body provided in the developing unit that has arrived at said opposing position ends developing said latent image until when said developing unit arrives at said detaching position, said writing member writes information into said element of said developing unit.

29. (original): An image forming apparatus according to claim 28, wherein during a period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said writing member writes information into said element of said developing unit.

30. (original): An image forming apparatus according to claim 27, wherein if, during the period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position, another developing

unit adjacent to said developing unit on the upstream side therefrom in a direction of movement of said moving body is to arrive at said opposing position, then

said writing member writes information into said element of said developing unit during a period until said other developing unit arrives at said opposing position.

31. (original): An image forming apparatus according to claim 27, wherein:

said image forming apparatus comprises an AC voltage supply section for supplying an AC voltage; and

said writing member writes information into said element of the developing unit attached to said attach/detach section when said AC voltage supply section is not supplying an AC voltage.

32. (original): An image forming apparatus according to claim 31, wherein:

said developing unit has a developer bearing body for bearing developer; and

said AC voltage supply section supplies an AC voltage to said developer bearing body.

33. (original): An image forming apparatus according to claim 31, wherein:

said image forming apparatus comprises a charging member for charging said photoconductor; and

said AC voltage supply section supplies an AC voltage to said charging member.

34. (original): An image forming apparatus according to claim 27, wherein

said writing member writes information into said element in a non-contact state with respect to said element.

35. (original): An image forming apparatus according to claim 31, wherein
a difference between a maximum voltage value and a minimum voltage value of said AC voltage is 1000 volts or more.

36. (original): An image forming apparatus according to claim 27, wherein
said writing member writes, into said element, information indicating a remaining amount of developer contained in the developing unit provided with said element.

37. (original): An image forming apparatus according to claim 27, wherein
said writing member writes, into said element, information indicating a usage amount of developer contained in the developing unit provided with said element.

38. (original): An image forming apparatus comprising:
a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element into which information can be written;
a photoconductor on which a latent image can be formed;
a writing member for writing information into said element; and

an attach/detach opening through which said developing unit is attached to and detached from the attach/detach section, wherein:

in a state in which said developing unit is positioned at an opposing position where said developing unit is in opposition to said photoconductor due to movement of said moving body, development of said latent image with the developer contained in said developing unit is possible;

in a state in which said developing unit is positioned at a detaching position that is different from said opposing position due to movement of said moving body, detachment of said developing unit from said attach/detach section via said attach/detach opening is possible;

during a period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said writing member writes information into said element of said developing unit;

if, during the period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position, another developing unit adjacent to said developing unit on the upstream side therefrom in a direction of movement of said moving body is to arrive at said opposing position, then

said writing member writes information into said element of said developing unit during a period until said other developing unit arrives at said opposing position;

said developing unit has a developer bearing body for bearing developer;

said image forming apparatus comprises an AC voltage supply section for supplying an AC voltage;

said AC voltage supply section supplies an AC voltage to said developer bearing body;
said writing member writes information into said element of the developing unit attached to said attach/detach section when said AC voltage supply section is not supplying an AC voltage to said developer bearing body;
said writing member writes information into said element in a non-contact state with respect to said element;
a difference between a maximum voltage value and a minimum voltage value of said AC voltage is 1000 volts or more; and
said writing member writes, into said element, information indicating a remaining amount or a usage amount of developer contained in the developing unit provided with said element.

39. (original): An image forming apparatus comprising:
a moving body provided with a plurality of developing unit attach/detach sections, wherein a developing unit having a developer containing section is attachable to and detachable from each of said developing unit attach/detach sections;
a photoconductor unit attach/detach section to and from which a photoconductor unit can be attached and detached, wherein said photoconductor unit has a photoconductor and an element into which information can be written;
a writing member for writing information into said element; and
an attach/detach opening through which said developing unit is attached to and detached from the attach/detach section, wherein:

in a state in which said developing unit is positioned at an opposing position where said developing unit is in opposition to said photoconductor due to movement of said moving body, development of a latent image formed on said photoconductor with the developer contained in said developing unit is possible;

in a state in which said developing unit is positioned at a detaching position that is different from said opposing position due to movement of said moving body, detachment of said developing unit from said developing unit attach/detach section via said attach/detach opening is possible; and

during a period from when said developing unit arrives at said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said writing member writes information into said element of said photoconductor unit.

40. (original): An image forming apparatus according to claim 39, wherein
during a period from when a developer bearing body provided in the developing unit that has arrived at said opposing position ends developing said latent image until when said developing unit arrives at said detaching position, said writing member writes information into said element of said photoconductor unit.

41. (original): An image forming apparatus according to claim 40, wherein
during a period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position due to movement of

said moving body, said writing member writes information into said element of said photoconductor unit.

42. (original): An image forming apparatus according to claim 39, wherein
if, during the period from when said developing unit starts moving from said opposing position until when said developing unit arrives at said detaching position, another developing unit adjacent to said developing unit on the upstream side therefrom in a direction of movement of said moving body is to arrive at said opposing position, then

said writing member writes information into said element of said photoconductor unit during a period until said other developing unit arrives at said opposing position.

43. (original): An image forming apparatus according to claim 39, wherein:
said image forming apparatus comprises an AC voltage supply section for supplying an AC voltage; and

said writing member writes information into said element of said photoconductor unit attached to said photoconductor unit attach/detach section when said AC voltage supply section is not supplying an AC voltage.

44. (original): An image forming apparatus according to claim 43, wherein:
said developing unit has a developer bearing body for bearing developer; and
said AC voltage supply section supplies an AC voltage to said developer bearing body.

45. (original): An image forming apparatus according to claim 43, wherein:
said image forming apparatus comprises a charging member for charging said
photoconductor; and
said AC voltage supply section supplies an AC voltage to said charging member.

46. (original): An image forming apparatus according to claim 39, wherein
said writing member writes information into said element in a non-contact state with
respect to said element.

47. (original): An image forming apparatus according to claim 43, wherein
a difference between a maximum voltage value and a minimum voltage value of said AC
voltage is 1000 volts or more.

48. (original): An image forming apparatus according to claim 39, wherein
said writing member writes, into said element, information indicating a remaining
amount of developer contained in the developing unit.

49. (original): An image forming apparatus according to claim 39, wherein
said writing member writes, into said element, information indicating a usage amount of
developer contained in the developing unit provided with said element.

50. (original): A computer system comprising:

a computer unit; and

an image forming apparatus that is connected to said computer unit and that includes

a moving body provided with a plurality of attach/detach sections, wherein a developing unit is attachable to and detachable from each of said attach/detach sections, and said developing unit has a developer containing section and an element into which information can be written;

a photoconductor on which a latent image can be formed;

a writing member for writing information into said element; and

an attach/detach opening through which said developing unit is attached to and detached from the attach/detach section;

wherein, in a state in which said developing unit is positioned at an opposing position where said developing unit is in opposition to said photoconductor due to movement of said moving body, development of said latent image with the developer contained in said developing unit is possible; and

wherein, in a state in which said developing unit is positioned at a detaching position that is different from said opposing position due to movement of said moving body, detachment of said developing unit from said attach/detach section via said attach/detach opening is possible;

wherein, during a period from when said developing unit arrives at said opposing position until when said developing unit arrives at said detaching position due to movement of said moving body, said writing member writes information into said element of said developing unit.

51. (original): A computer system comprising:

a computer unit; and

an image forming apparatus that is connected to said computer unit and that includes
a moving body provided with a plurality of developing unit attach/detach sections,
wherein a developing unit having a developer containing section is attachable to and detachable
from each of said developing unit attach/detach sections;

a photoconductor unit attach/detach section to and from which a photoconductor unit can
be attached and detached, wherein said photoconductor unit has a photoconductor and an
element into which information can be written;

a writing member for writing information into said element; and

an attach/detach opening through which said developing unit is attached to and detached
from the attach/detach section;

wherein, in a state in which said developing unit is positioned at an opposing position
where said developing unit is in opposition to said photoconductor due to movement of said
moving body, development of a latent image formed on said photoconductor with the developer
contained in said developing unit is possible; and

wherein, in a state in which said developing unit is positioned at a detaching position that
is different from said opposing position due to movement of said moving body, detachment of
said developing unit from said developing unit attach/detach section via said attach/detach
opening is possible;

wherein, during a period from when said developing unit arrives at said opposing position
until when said developing unit arrives at said detaching position due to movement of said
moving body, said writing member writes information into said element of said photoconductor
unit.